

Starter package TP700 Outdoor incl. Outdoor SD Card, touch pen system and engineering system, WinCC Comfort



| General information | |
|--------------------------------|---|
| Product type designation | TP700 Outdoor |
| Display | |
| Design of display | TFT, bonded, daylight-readable |
| Screen diagonal | 7 in |
| Display width | 152.4 mm |
| Display height | 91.4 mm |
| Number of colors | 16 777 216 |
| Resolution (pixels) | |
| • Horizontal image resolution | 800 Pixel |
| • Vertical image resolution | 480 Pixel |
| Backlighting | |
| • MTBF backlighting (at 25 °C) | 50 000 h |
| • Backlight dimmable | Yes; LED, can be dimmed manually or automatically |
| Control elements | |
| Keyboard fonts | |
| • Function keys | |
| — Number of function keys | 0 |

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| • Keys with LED | No |
| • System keys | No |
| • Numeric keyboard | Yes; Onscreen keyboard |
| • alphanumeric keyboard | Yes; Onscreen keyboard |
| Touch operation | |
| • Design as touch screen | Yes; analog, resistive |
| Expansions for operator control of the process | |
| • DP direct LEDs (LEDs as S7 output I/O) — F1...Fx | 0 |
| • Direct keys (keys as S7 input I/O) — F1...Fx | 0 |
| • Direct keys (touch buttons as S7 input I/O) | 32 |
| Installation type/mounting | |
| Mounting position | vertical |
| Mounting in portrait format possible | Yes |
| Mounting in landscape format possible | Yes |
| maximum permissible angle of inclination without external ventilation | 35° |
| Supply voltage | |
| Type of supply voltage | DC |
| Rated value (DC) | 24 V |
| permissible range, lower limit (DC) | 19.2 V |
| permissible range, upper limit (DC) | 28.8 V |
| Input current | |
| Current consumption (rated value) | 0.7 A |
| Starting current inrush I ² t | 0.5 A ² ·s |
| Power | |
| Active power input, typ. | 17 W |
| Processor | |
| Processor type | X86 |
| Memory | |
| Flash | Yes |
| RAM | Yes |
| Memory available for user data | 12 Mbyte |
| Type of output | |
| Info LED | No |
| Power LED | No |
| Error LED | No |
| Acoustics | |
| • Buzzer | No |

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| • Speaker | Yes |
| Time of day | |
| Clock | |
| • Hardware clock (real-time) | Yes |
| • Software clock | No |
| • retentive | Yes; Back-up duration typically 6 weeks |
| • synchronizable | Yes |
| Interfaces | |
| Number of industrial Ethernet interfaces | 2 |
| Number of RS 485 interfaces | 1; RS 422 / 485 combined |
| Number of RS 422 interfaces | 1 |
| Number of RS 232 interfaces | 0 |
| Number of USB interfaces | 2; USB 2.0 |
| • USB Mini B | 1; 5-pole |
| Number of 20 mA interfaces (TTY) | 0 |
| Number of parallel interfaces | 0 |
| Number of other interfaces | 0 |
| Number of SD card slots | 2 |
| With software interfaces | No |
| Industrial Ethernet | |
| • Industrial Ethernet status LED | 2 |
| • Number of ports of the integrated switch | 2 |
| Protocols | |
| PROFINET | Yes |
| Supports protocol for PROFINET IO | Yes |
| IRT | Yes; WinCC V13 SP1 HSP or higher |
| PROFIBUS | Yes |
| MPI | Yes |
| Protocols (Ethernet) | |
| • TCP/IP | Yes |
| • DHCP | Yes |
| • SNMP | Yes |
| • DCP | Yes |
| • LLDP | Yes |
| WEB characteristics | |
| • HTTP | Yes |
| • HTTPS | No |
| • HTML | Yes |
| • XML | No |
| • CSS | Yes |
| • Active X | No |

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| • JavaScript | Yes |
| • Java VM | No |
| Redundancy mode | |
| Media redundancy | |
| — MRP | Yes; WinCC V13 SP1 HSP or higher |
| Further protocols | |
| • CAN | No |
| • EtherNet/IP | Yes |
| • MODBUS | Yes |
| EMC | |
| Emission of radio interference acc. to EN 55 011 | |
| • Limit class A, for use in industrial areas | Yes |
| • Limit class B, for use in residential areas | No |
| Degree and class of protection | |
| IP (at the front) | IP66 |
| IP (rear) | IP20 |
| NEMA (front) | |
| • Enclosure Type 4 at the front | Yes |
| • Enclosure Type 4x at the front | Yes |
| Standards, approvals, certificates | |
| CE mark | Yes |
| cULus | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| Use in hazardous areas | |
| • ATEX Zone 2 | Yes; For inscription on device rating plate |
| • ATEX Zone 22 | Yes; For inscription on device rating plate |
| • IECEx Zone 2 | Yes; For inscription on device rating plate |
| • IECEx Zone 22 | Yes; For inscription on device rating plate |
| • cULus Class I Zone 1 | No |
| • cULus Class I Zone 2, Division 2 | Yes; For inscription on device rating plate |
| • FM Class I Division 2 | Yes; For inscription on device rating plate |
| Marine approval | |
| • Germanischer Lloyd (GL) | Yes |
| • American Bureau of Shipping (ABS) | Yes |
| • Bureau Veritas (BV) | Yes; Available soon |
| • Det Norske Veritas (DNV) | Yes |
| • Korean Register of Shipping (KRS) | No; Available soon |
| • Lloyds Register of Shipping (LRS) | Yes |
| • Nippon Kaiji Kyokai (Class NK) | Yes; Available soon |
| • Polski Rejestr Statkow (PRS) | No |

- Chinese Classification Society (CCS) Yes; Available soon
- Compass working clearance 5 m

Ambient conditions

- Suited for indoor use Yes
- Suited for outdoor use Yes; Powder-coated, UV resistant

Ambient temperature during operation

- Operation (vertical installation)
 - For vertical installation, min. -30 °C
 - For vertical installation, max. 60 °C; (55 °C, see entry ID: 64847814)
- Operation (max. tilt angle)
 - At maximum tilt angle, min. -30 °C
 - At maximum tilt angle, min. 50 °C
- Operation (vertical installation, portrait format)
 - For vertical installation, min. -30 °C
 - For vertical installation, max. 50 °C
- Operation (max. tilt angle, portrait format)
 - At maximum tilt angle, min. -30 °C
 - At maximum tilt angle, min. 45 °C

Ambient temperature during storage/transportation

- min. -30 °C
- max. 70 °C

Altitude during operation relating to sea level

- Installation altitude above sea level, max. 3 000 m; Depending on the operating temperature

Relative humidity

- Operation, max. 90 %; no condensation

Operating systems

- proprietary No
- pre-installed operating system
 - Windows CE Yes

Configuration

- Message indicator Yes
- Alarm system (incl. buffer and acknowledgment) Yes
- Process value display (output) Yes
- Process value default (input) possible Yes
- Recipe management Yes

Configuration software

- STEP 7 Basic (TIA Portal) No
- STEP 7 Professional (TIA Portal) No
- WinCC flexible Compact No
- WinCC flexible Standard No
- WinCC flexible Advanced No

- WinCC Basic (TIA Portal)
- WinCC Comfort (TIA Portal)
- WinCC Advanced (TIA Portal)
- WinCC Professional (TIA Portal)

No
 Yes; WinCC V13 SP1 Update 7 + HSP or higher
 Yes; WinCC V13 SP1 Update 7 + HSP or higher
 Yes; WinCC V13 SP1 Update 7 + HSP or higher

Languages

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| Online languages | |
| • Number of online/runtime languages | 32 |
| Project languages | |
| • Languages per project | 32 |

Functionality under WinCC (TIA Portal)

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| Libraries | Yes |
| Applications/options | |
| • Web browser | Yes |
| • Pocket Word | Yes |
| • Pocket Excel | Yes |
| • PDF Viewer | Yes |
| • Media Player | Yes |
| • SIMATIC WinCC Sm@rtServer | Yes |
| • SIMATIC WinCC Audit | Yes |
| Number of Visual Basic Scripts | Yes |
| Task planner | |
| • time-controlled | Yes |
| • task-controlled | Yes |
| Help system | |
| • Number of characters per info text | 70 |
| Message system | |
| • Number of alarm classes | 32 |
| • Bit messages | |
| — Number of bit messages | 4 000 |
| • Analog messages | |
| — Number of analog messages | 200 |
| • S7 alarm number procedure | Yes |
| • System messages HMI | Yes |
| • System messages, other (SIMATIC S7, Sinumerik, Simotion, etc.) | Yes |
| • Number of characters per message | 80 |
| • Number of process values per message | 8 |
| • Acknowledgment groups | Yes |
| • Message indicator | Yes |
| • Message buffer | |
| — Number of entries | 1 024 |

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| — Circulating buffer | Yes |
| — retentive | Yes |
| — maintenance-free | Yes |
| Recipe management | |
| • Number of recipes | 300 |
| • Data records per recipe | 500 |
| • Entries per data record | 1 000 |
| • Size of internal recipe memory | 2 Mbyte |
| • Recipe memory expandable | Yes |
| Variables | |
| • Number of variables per device | 2 048 |
| • Number of variables per screen | 400 |
| • Limit values | Yes |
| • Multiplexing | Yes |
| • Structures | Yes |
| • Arrays | Yes |
| Images | |
| • Number of configurable images | 500 |
| • Permanent window/default | Yes |
| • Global image | Yes |
| • Image selection by PLC | Yes |
| • Image number in the PLC | Yes |
| Image objects | |
| • Number of objects per image | 400 |
| • Text fields | Yes |
| • I/O fields | Yes |
| • Graphic I/O fields (graphics list) | Yes |
| • Symbolic I/O fields (text list) | Yes |
| • Date/time fields | Yes |
| • Switches | Yes |
| • Buttons | Yes |
| • Graphic display | Yes |
| • Icons | Yes |
| • Geometric objects | Yes |
| Complex image objects | |
| • Number of complex objects per screen | 20 |
| • Alarm view | Yes |
| • Trend view | Yes |
| • User view | Yes |
| • Status/control | Yes |
| • Sm@rtClient view | Yes |

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|--|---------------------------|
| • Recipe view | Yes |
| • f(x) trend view | Yes |
| • System diagnostics view | Yes |
| • Media Player | Yes |
| • HTML browser | Yes |
| • PDF display | Yes |
| • IP camera display | Yes; Webcam type see FAQs |
| • Bar graphs | Yes |
| • Sliders | Yes |
| • Pointer instruments | Yes |
| • Analog/digital clock | Yes |
| Lists | |
| • Number of text lists per project | 500 |
| • Number of entries per text list | 500 |
| • Number of graphics lists per project | 500 |
| • Number of entries per graphics list | 500 |
| Archiving | |
| • Number of archives per device | 50 |
| • Number of entries per archive | 20 000 |
| • Message archive | Yes |
| • Process value archive | Yes |
| • Archiving methods | |
| — Sequential archive | Yes |
| — Short-term archive | Yes |
| • Memory location | |
| — Memory card | Yes |
| — USB memory | Yes |
| — Ethernet | Yes |
| • Data storage format | |
| — CSV | Yes |
| — TXT | Yes |
| — RDB | Yes |
| Security | |
| • Number of user groups | 50 |
| • Number of user rights | 32 |
| • Number of users | 50 |
| • Password export/import | Yes |
| • SIMATIC Logon | Yes |
| Logging through printer | |
| • Alarms | Yes |
| • Report (shift log) | Yes |

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| • Hardcopy | Yes |
| • Electronic print to file | Yes; PDF, HTML |
| Character sets | |
| • Keyboard fonts | |
| — US English | Yes |
| Transfer (upload/download) | |
| • MPI/PROFIBUS DP | Yes |
| • USB | Yes |
| • Ethernet | Yes |
| • using external storage medium | Yes; Backup/restore |
| Process coupling | |
| • S7-1200 | Yes |
| • S7-1500 | Yes |
| • S7-200 | Yes |
| • S7-300/400 | Yes |
| • LOGO! | Yes |
| • WinAC | Yes |
| • SINUMERIK | Yes; with SINUMERIK option package |
| • SIMOTION | Yes |
| • Allen Bradley (EtherNet/IP) | Yes |
| • Allen Bradley (DF1) | Yes |
| • Mitsubishi (MC TCP/IP) | Yes |
| • Mitsubishi (FX) | Yes |
| • OMRON (FINS TCP) | No |
| • OMRON (LINK/Multilink) | Yes |
| • Modicon (Modbus TCP/IP) | Yes |
| • Modicon (Modbus) | Yes |
| • OPC UA Client | Yes |
| • OPC UA Server | Yes |
| Service tools/configuration aids | |
| • Backup/Restore manually | Yes |
| • Backup/Restore automatically | Yes |
| • Simulation | Yes |
| • Device switchover | Yes |
| Peripherals/Options | |
| Printer | Yes |
| SIMATIC HMI MM memory card: Multi Media Card | Yes |
| SIMATIC HMI SD memory card: Secure Digital memory card | Yes |
| SIMATIC HMI CF memory card Compact Flash Card | No |
| USB memory | Yes; e.g. USB RFID reader, see FAQ entry ID: 99808171 |

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| SIMATIC IPC USB Flashdrive (USB stick) | Yes |
| SIMATIC HMI USB stick | Yes |
| Network camera | Yes; See FAQ Entry ID: 62383298 and entry ID: 65647473 |

Accessories

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|-----------------------------------|---|
| Expansion module | Optional e.g. USB RFID reader, see FAQ entry ID: 99808171 |
| Further accessories are available | Yes; incl. 1x outdoor SD system card, 1x touch pen system for resistive and capacitive touch displays, and current engineering system WinCC Comfort |

Mechanics/material

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| Enclosure material (front) | |
| <ul style="list-style-type: none"> • Plastic • Aluminum • Stainless steel | <p>No</p> <p>Yes; Powder-coated, UV resistant</p> <p>No</p> |

Dimensions

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|----------------------------|--------|
| Width of the housing front | 214 mm |
| Height of housing front | 158 mm |
| Mounting cutout, width | 197 mm |
| Mounting cutout, height | 141 mm |
| Overall depth | 67 mm |

Weights

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| Weight without packaging | 1.8 kg |
| Weight incl. packaging | 2.1 kg |

Other

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| Note: | Power, quantity structure and performance correspond to a standard 7" Comfort Panel |
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